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AUTHOR Baker, Richard A.; And Others
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ABSTRACT

To investigate and resolve some of the problems associated with developing a permanent state-wide occupational information service system for planning and programing vocational education, a small scale data bank was developed for six selected countries in Alabama. Inputs were collected from 38 high schools offering vocational education, two post-secondary vocational institutes, three county employment offices, one chamber of commerce, four institutions offering non-public supported programs, and some manpower training programs. The occupation-industry material approach was used to estimate employment levels, and a cross tabulation computer program was used to project employment. The information output components were: (1) demographic, (2) manpower demand, (3) manpower supply, and (4) resources inventories. Charts and exhibits illustrate the kinds of information available and its output organization from the system. (Author)

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A PILOT INVESTIGATION FOR DEVELOPING AND OPERATING A STATE OCCUPATIONAL INFORMATION SERVICE SYSTEM FOR VOCATIONAL-TECHNICAL EDUCATION

Richard A. Baker
James R. Barnes
Raymond Hill
Occupational Research and Development Unit
Department of Vocational and Adult Education
Auburn University
Auburn, Alabama 36830

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CONTENTS

SECTION		PAGE
I.	Summary	1
II.	Introduction	2
	Problem	5
	Purposes of the Study	5
III.	Methodology	6
IV.	Findings	9
V.	References	10
VI.	Bibliography	11
VII.	Exhibits	14

Figure 1 - Data Bank Counties

SUMMARY

The purpose of this study was to investigate and resolve some of the problems associated with developing occupational information service systems for planning and programming vocational education on a school district, county and multi-county basis. The volume and nature of the data to be handled were the major factors under study.

The study involved state and local agencies of six counties in Alabama. All activities were directed toward the development of instruments, procedures, and techniques for identifying, collecting, storing, retrieving, organizing and disseminating information.

The information output components for the small-scale system were demographic, manpower demand, manpower supply, and resources inventories.

INTRODUCTION

One generally accepted goal of public education is that appropriate vocational education programs should be made accessible to persons of all ages in all communities. These programs must be realistic in light of actual or anticipated opportunities for gainful employment and suited to the needs, interests, and abilities of potential enrollees.

The development of high quality programs will be dependent upon current local and state data relative to enrollment in occupational training programs; manpower demand; inventories of human and physical training resources; employment; demographic characteristics of the labor force; and the growth; stability; or decline of particular industries.

The development of a state plan and local program plans are requirements under the Vocational Education Amendments of 1968. Section 123 of the Act dealing with state plans makes it clear that states will be expected to develop a state-local planning procedure that will provide the training needs of all people as well as meet the needs of the labor market. If the legislative mandate is to be carried out states must assist local educational agencies by providing planning data.

There is little evidence of research and development activities being conducted in the development of information systems for planning and programming vocational education. The absence of such activities is probably due, first, to the necessity of establishing a system through the cooperative efforts of a number of public and private agencies, and second, the nature of information systems.

The basic concepts of information collection, storage, retrieval, and dissemination can be understood only if some aspects of the general nature of information systems are first investigated. This has not been accomplished successfully by vocational educators even in settings where they have or could obtain complete cooperation of the various public agencies. Many of these agencies have in their information system, data which would be of value in planning, programming, managing and evaluating vocational education programs.

To provide high quality vocational education programs, a vast amount of information is required about the student population and employment opportunities within the labor market. Kotz[1] states that. . .

> manpower demand and supply, including projections and their validity, is of great importance to vocational education. The factors that most critically affect occupational education include

> the interests of and the choice exercised by students; the manpower demands of the nation in both the public and private sector; the existing supply of manpower and its characteristics including adaptability.

Divisions of vocational education in state departments of education and other state agencies collect occupational information of many types, but the lack of coordination has resulted in much overlap, duplication, and repetition of effort by persons supplying information. In most instances the type of information supplied is not adequate. Kotz states. . .

> there is now agreement between the Department of Labor and Education at the national and state levels to the effect that the former will provide essential job requirements data to the latter. At the state and local level, there is a woeful shortage of the kind of data necessary.

The situation may be that the data presently available from such sources are not being collected nor properly utilized. Goodwin[2] in a statement indicates that. . .

> the absence of up-to-date data on current job opportunities, the roster of unfilled job openings listed with the local employment offices represent the best available information on occupations for which workers are being sought within a state or local area.

There seems to be a lack of coordination between vocational education and other agencies in providing enrollment data in vocational training programs. There is also a lack of coordination between these agencies in determining the availability of trained manpower and the labor market demand for manpower by job classification categories. This lack of coordination was recognized by Medvin[3] in his statement that. . .

> a gap which is inherent in studies to date, with such exceptions as the area skill survey and to some extent the BLS model, is the absence of labor supply figures.

And by Kotz in his statement that. . .

> no studies are made of total supply coming out of the pipelines--proprietary, religious schools, manpower development and training, and on-the-job training--nor is any responsibility assigned or recognized for such summation and evaluation of total supply as related to demand.

> . . . The growth, stability, or decline of particular industries has direct effect on the demand and supply for manpower. Among other labor market considerations, the educator must be concerned with trends in employment by occupational categories and by job family, skill requirements, the relationship between filled jobs and job vacancies as forecast for the state or metropolitan area, and the size of the existing work force to meet that demand.

The need for an on-going occupational information service system is clearly recognized by Lecht[4] in his statement that. . .

> manpower projections can be useful to government, to business establishments, or to groups such as this because they help to reduce uncertainty. They can indicate probable limits to change in manpower needs and can also show the probable consequences of pursuing alternative policies, including doing nothing. However, projections are not the same thing as predictions. We are many years away in the social sciences from being able to make successful quantitative predictions for a five- or ten-year period.

A sub-committee of the President's Committee on Manpower expressed a need for manpower projection.[5] The committee further states:

> . . .Any projection is an attempt to outline the future - thus, uncertainty is inherent. Nevertheless, the working group believes that errors in projections are only in part due to the uncertainty of future developments; ill-chosen assumptions, haphazard techniques, untrained staff, poor data, and lack of communication among government agencies may be major sources of error. Too frequently manpower projections have been developed on an ad hoc basis using ad hoc methods. Among our most important findings is that few agencies have put sufficient stress on the quality of manpower projections. Many have only limited technical capabilities and are operating with inadequate standards. Even in the Bureau of Labor Statistics, where the responsibility for national manpower projections is freely acknowledged, the staff is hampered by inadequate resources, limited research support, and almost unlimited demand for ad hoc specific, as well as general-purpose, projections.

The need for reliable information for planning is a problem that exists in all social agencies. The commonality of planning problems and the need for related data by all social agencies could contribute to the development of a total data system.

Given the realities of the economic and social setting, the problem in vocational education is then how to improve and develop an information system which utilizes existing data and transforms it into a more usable form.

The Problem

It is becoming increasingly apparent to professional personnel in vocational education that occupational information must be systematized so that a sequence of events can be applied which starts with the statement of questions and ends with the receipt of information for making decisions. There are few, if any, information systems on a local or state level to which questions can be addressed that have high relevance for planning and programming in vocational education.

Amazing progress has been made in the development of high speed electronic data processing equipment. Improved data processing techniques for data analysis are now available, but vocational educators have not been able to utilize the new technology because occupational information has not been collected and stored in a form that can be retrieved.

There is little evidence of any effort on the part of state and local agencies to develop computerized information systems which can handle an input question statement and translate the statement into usable information language for planners.

There exists an urgent need for a computerized information processing system on a state level which addresses itself to providing information for planning and programming vocational education on a school district, county and multi-county basis.

Purpose of the Study

The central purpose of this study was to investigate and resolve some of the problems associated with developing a permanent state-wide occupational information service system for planning and programming vocational education. More specific objectives were:

1. To develop instruments and procedures for collecting information relative to vocational-technical education students and programs from state-supported schools and private agencies.

2. To develop procedures for collecting social, economic, and occupational data for computer processing from selected state-supported agencies, private agencies, and selected businesses and industries.

3. To develop data-processing techniques for systematizing and integrating occupational information.

METHODOLOGY

Scope

This study involved the development of a small scale data bank for six selected counties in Alabama (Figure 1). In order to resolve the problems associated with developing a state-wide information system, the small scale system was flexibly designed so that the data input and information output could be expanded to include school districts within counties within vocational planning areas and state-wide totals. Inputs into the small scale were collected from 38 high schools offering vocational education within 10 school districts; two state supported post-secondary vocational institutes; three county employment field offices; one area chamber of commerce; four institutions providing non-public supported occupational training programs; and manpower training programs under the Manpower Training and Development Act.

In addition to the local agencies, inputs were also included from the Alabama State Employment Service; Bureau of Business and Economic Research, University of Alabama; Alabama Department of Agriculture and Industries; Alabama State Department of Education; Alabama Department of Public Health; Alabama Department of Pensions and Security; and Alabama Department of Industrial Relations.

Data Collection

All activities were directed toward the development of instruments, procedures and techniques that could be replicated in a total state system.

The development of the small-scale information system was conceptualized as an information flow process. The data input functions consisted of identifying, collecting, screening, coding, and storing data from both public and private agencies.

The volume and nature of data to be handled and the services to be performed were the major factors under study. Considerable effort was devoted to the planning of a system to permit conversion of present hand-operations to computer operations. This was particularly true with the data gathering and tabulation functions associated with the reporting procedures for state supported vocational education programs.

Standard twelve-row-eighty-column data processing was used for assembling numerical data collected from state agencies, businesses and statistical publications. Data collected to supplement available secondary employment data were collected from businesses by mail surveys.

Figure 1. Data Bank Counties

Exhibit A is an example of several instruments used in mail surveys.

Special thirty-row-eighty-column data processing cards were designed and a User's Manual (Exhibits B through E) was developed for collecting data from public and private vocational schools.

Special cards were also designed to collect follow-up information from public school vocational program graduates. The address card reflected in Exhibit F was completed either by the student or instructor upon completion of the program and used to obtain computer printed mailing labels for mailing a follow-up card (Exhibit G) to the student nine months later.

Data Analysis

The occupation-industry matrix approach was used to estimate occupational employment levels. The inputs for the matrix development were: (1) industry employment levels involving industry subdivisions by SIC[6] for five previous years, and (2) occupational composition patterns classified by DOT six digit basis[7] for the corresponding industry segments. Occupational pattern ratios as extracted from Department of Labor Publications were used as the basis for the occupation industry matrix.[8] The findings of mail surveys conducted in Alabama were used to compare the national occupation ratios with Alabama ratios for basic industry groups.

Given projected employment levels (Exhibit H) and occupation industry ratios, a cross tabulation computer program was used to project employment by occupations.

Data analysis for manpower supply and other demographic data was accomplished through special written descriptive computer programs for data read onto magnetic tape by a Model 1501 Republic Electronic systems optical card scanner.

FINDINGS

The central purpose of this study was to investigate and resolve some of the problems associated with developing an occupational information system. The volume and nature of data input and information output were the major factors under study. The information output components for the system were: (1) demographic, (2) manpower demand, (3) manpower supply, and (4) resources inventories.

Demographic

One of the primary purposes of vocational education is to serve non-college-bound students needing occupational skills. Therefore, the vocational planner and other decision makers need a description of the student population. Exhibits I through L reflect the kinds of information available and its output organization from the system.

Manpower Demand

Once the vocational planner has the enrollment projections and other demographic information he is then ready to relate this information to annual openings which is an indicator of the demand for manpower with various types of education and training. Exhibit M reflects the kinds of information available and its output organization from the system. The number of annual openings does not reflect the movement of workers from one occupation to another, but the openings created by normal growth and replacement needs due to death or retirement.

Manpower Supply

In order to get occupational program objectives sensitive to the labor market and the educational needs and interests of the population, the vocational planner must have an estimate of the number of graduates or terminees per year, and also an estimate of previous graduates actually accepting jobs in occupations related to their training. Exhibits N and O reflect the kinds of information available and its output organization from the system.

Resources Inventories

Decisions to adjust vocational programs depend not only on what is happening in the labor market and needs of students, but also is dependent upon the availability of vocational personnel and vocational instructional facilities. Exhibits P through T reflect the information available and its output organization from the system.

REFERENCES

[1]Arnold Kotz, ed. Occuptional Education: Planning and Programming, A research study, Vol. 1 (Melno Park, California: Stanford Research Institute, (1967) p. 23.

[2]Robert C. Goodwin, "Locating Manpower Needs," American Vocational Journal, Vol. 43, No. 6, (1968) p. 20.

[3]Norman Medvin, "Forecasting Occupational Job Requirements," Occupational Education: Planning and Programming. A research study Vol. II (Melno Park, California: Stanford Research Institute, 1967) p. 410.

[4]Leonard A. Lecht, "Manpower Requirements to Meet National Goals in Research and Development," Occupational Education: Planning and Programming. A research study, Vol. I (Melno Park, California: Stanford Research Institute, 1967), p. 425.

[5]Manpower Administration. "Manpower Projections: An Appraisal and A Plan of Action", U. S. Department of Labor (1967), p. 10.

[6]United States Bureau of the Budget, Standard Industrial Classification Manual (1957 ed.), (Washington: Government Printing Office).

[7]United States Department of Labor, Dictionary of Occupational Titles (3rd ed.): 1965. Vol. I and II. (Washington: Government Printing Office).

[8]United States Department of Labor, Tomorrow's Manpower Needs (Washington: Government Printing Office)

BIBLIOGRAPHY

Alabama Department of Industrial Relations, Alabama State Employment Service. Labor Market News (67 Alabama Counties-monthly). Montgomery: Alabama State Employment Service, 1970.

Alabama Resources Development Committee. Agribusiness in Alabama. Montgomery: Alabama Resources Development Committee, 1968.

Beard, H. G., seminar chairman. National Vocational-Technical Education Seminar on Occupational Mobility and Migration, Center for Occupational Education, North Carolina State University at Raleigh, Report No. 2, 1966.

Brainerd, Carol P. Job Mobility and Occupational Change, Industrial Research Unit Report No. 15, Industrial Research Unt, Department of Industry, Wharton School, University of Pennsylvania, 1966.

Duncan, Otis Dudley, and Hodge, Robert. "Education and Occupational Mobility: A Regression Analysis," American Sociological Review, May 1963.

Duncan, Otis Dudley. "The Trend of Occupational Mobility in the United States," American Sociological Review, August 1965.

Fishman, Leslie, et al., Methodology for Projection of Trends in the Denver Standard Metropolitan Area, Bureau of Economic Research, Institute of Behavioral Science, University of Colorado, Boulder, Colorado, March 1966, funded under MDTA 42-64.

Goodwin, Robert C. "Locating Manpower Needs," American Vocational Journal, Vol. 43, No. 6, (1968) p. 20.

Greenspan, Harry, "Estimates of Employment Requirements by Occupation for Future Periods--Data Sources and Model Development," Institute of Industrial Relations, University of California, 1966.

Harms, Louis T., et al., "Projective Models of Employment by Industry and by Occupation for Small Areas: A Case Study, Bureau of Economic and Business Research," Temple University, Philadelphia, Pennsylvania, March 1966, funded under MDTA 41-64.

Hu, Teh-wei, et al. A Cost-Effectiveness Study of Vocational Education, Institute for Research on Human Resources, The Pennsylvania State University, March 1969.

Hunter, Lawrence C., and Reid, Graham L. Urban Worker Mobility, Organization for Economic Cooperation and Development, Paris 1968.

Hollister, Robinson G. "The Economics of Manpower Forecasting," International Labour Review, April 1964.

Kershaw, Joseph A., and Roland N. McKean, "Systems Analysis and Education," working paper, RM-2473-FF, The Rand Corporation, Santa Monica, California, October 30, 1959.

Kotz, Arnold, ed. Occupational Education: Planning and Programming, A research study, Vol. 1 (Melno Park,California: Stanford Research Institute, (1967) p. 23.

Lansing, John B., and Mueller, Eva. The Geographic Mobility of Labor, Institute for Social Research, Survey Research Center, The University of Michigan, 1967.

Lecht, Leonard A. "Manpower Requirements to Meet National Goals in Research and Development," Occupational Education: Planning and Programming. A research study, Vol. I (Melno Park, California: Stanford Research Institute, 1967), p. 425.

Manpower Administration, "Manpower Projections: An Appraisal and A Plan of Action", U. S. Department of Labor (1967), p. 10.

March, Georgianna B., ed. "Occupational Data Requirements for Educational Planning," Center For Studies in Vocational and Technical Education, University of Wisconsin, 1966.

Medvin, Norman. "Forecasting Occupational Job Requirements," Occupational Education: Planning and Programming. A research study Vol. II (Melno Park, California: Stanford Research Institute, 1967) p. 410.

National Bureau of Economic Research. The Measurement and Interpretation of Job Vacancies, Columbia University Press, New York, 1966.

Piore, Michael J. "On-the-Job Training and Adjustment ot Technological Change," The Journal of Human Resources, Fall 1968.

Saben, Samuel. "Occupational Mobility of Employed Workers," Special Labor Force Report #84, Bureau of Labor Statistics, Reprint #2531, Washington, D.C., USGPO, 1967.

Somers, Gerald G. "The Response of Vocational Education to Labor Market Changes," The Journal of Human Resources, Supplement,

Thomas, Lawrence G., The Occupational Structure and Education, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1956.

United States Department of Commerce, Bureau of the Census. County and City Data Book-1967. Washington, D.C.: Government Printing Office, 1967.

United States Department of Commerce, Bureau of the Census. 1968 County Business Patterns-Alabama. Washington, D.C.: Government Printing Office, 1969.

United States Department of Commerce, Bureau of the Census. United States Census of Agriculture: 1964, Vol. 1, Part 32, Alabama. Washington, D.C.: Government Printing Office, 1967.

United States Bureau of the Budget, Standard Industrial Classification Manual (1957 ed), (Washington: Government Printing Office).

United States Department of Labor, Dictionary of Occupational Titles (3rd ed): 1965. Vol. I and II. (Washington: Government Printing Office).

United States Department of Labor, Bureau of Labor Statistics, Tomorrow's Manpower Needs, Vol. IV, No. 1606. (Washington, D.C.: Government Printing Office, 1969).

United States Department of Health, Education, and Welfare. Digest of Educational Statistics, Office of Education, Washington, D.C., 1966, p. 17.

"An Appraisal of Area Skill Surveys in Battle Creek, Michigan, and Trenton, New Jersey," John Fletcher Wellemyer Association, Washington, D.C., November 1965.

"Mobility and Worker Adaption to Economic Change in the United States," Manpower Research Bulletin No. 1, Revised July 1963.

Statement of Stanley H. Ruttenberg, Assistant Secretary of Labor and Manpower Administrator before the General Subcommittee on Education of the House Committee on Education and Labor on Vocational Education Act of 1963, August 16, 1966.

"The Returns to Geographic Mobility: A Symposium," The Journal of Human Resources, Fall 1967.

EXHIBIT A

Include in the answers below only those persons employed at this location.

1. What is the county number on the automobile tag for the county in which this business is located? _____

2. Which of the following categories most appropriately describes the function of this business? (check only one)

   A. Retail
   B. Wholesale Trade
   C. Service

3. Which of the following categories most appropriately describes the activity of this business? (check only one)

Do not write in this space			
A	B	C	
		731	Advertising Services
56	5036-7		Apparel and Accessories
54	504		Food Distribution
581			Food Services
		70	Hotel and Lodging
		79	Recreation and Tourism
571	5097		Home Furnishings
525	507		Hardware, Building Materials,
596	5083		Farm & Garden Supplies & Equipment
5992	509		Floristry
53	503		General Merchandising
55	501		Automotive
554	5092		Petroleum
		60,61,62	Finance & Credit
		63,64	Insurance
		65	Real Estate
		40-49	Transportation, Utilities
		72	Personal Services
599			Retail Trade, Other
	509-8		Wholesale Trade, Other
		89	Services, Other
			None of the above

4. Record the largest number of employees working for you at any one time during the years indicated.

	1967	1968	1969	1970
Number full-time	____	____	____	____
Number part-time	____	____	____	____

5. Give the number of employees you hired during the last twelve months.

Number full-time ____ Number part-time ____

6. Give the number of employees needed to fill present vacancies.

Number full-time ____ Number part-time ____

7. Do you plan to reduce the number of employees now in this business?

Number full-time ____ Number part-time ____

8. Estimate the number of employees you plan to add in this business in each of the following years.

	1971	1973	1975
Number full-time	____	____	____
Number part-time	____	____	____

9. Indicate the number of employees who left your employment during the past twelve months for the following reasons.

	Number
a. Left to accept a similar job in another business.	____
b. Total number who left (include those above and others who left).	____

10. Do you currently have employees enrolled in an organized training program? (Not on-the-job nor public school training) If so, how many? Number ____

11. Of the total number of workers presently employed by this business, how many are employed:

AS----------AT THE LEVEL OF:

	Beginning Employees (One year or less of total experience)	Experienced Employees (Over one year of total experience)	Managerial & Supervisory Employees
Store managers			
Sales Persons			
Route Salesmen			
Cashiers			
Markers			
Receiving Clerks			
Stock Clerks			
Delivery Clerks			
Display Workers			
Credit & Collection Workers			
Interior Decorators			
Automotive Parts Countermen			
Service Station Workers			

AS	AT THE LEVEL OF:		
	Beginning Employees (One year or less of total experience)	Experienced Employees (Over one year of total experience)	Managerial & Supervisory Employees
Baggers			
Produce Clerks			
Waiters and Waitresses			
Hostesses			
Food Service Counterworkers			
Hotel Clerks			
Stewards & Stewardesses			
Ticket Clerks, Transportation			
Layout & Copy Workers			
Buyers			
All Other Employees			

EXHIBIT B

86357

MASTER DATA CARD

1	VOCATIONAL DIVISION	2	0 1 2 3 4 5 6 7 8 9 *
		3	0 1 2 3 4 5 6 7 8 9 *
2	OCCUPATION IDENTIFICATION OE CODE NUMBER	4	0 1 2 3 4 5 6 7 8 9 *
		5	0 1 2 3 4 5 6 7 8 9 *
		6	0 1 2 3 4 5 6 7 8 9 *
		7	0 1 2 3 4 5 6 7 8 9 *
3	INSTRUCTIONAL PROG.	8	0 1 2 3 4 5 6 7 8 9 *
4	PROGRAM CLASSIFICATION	9	0 1 2 3 4 5 6 7 8 9 *
		10	0 1 2 3 4 5 6 7 8 9 *
5	SCHOOL CODE	11	0 1 2 3 4 5 6 7 8 9 *
		12	0 1 2 3 4 5 6 7 8 9 *
		13	0 1 2 3 4 5 6 7 8 9 *
		14	0 1 2 3 4 5 6 7 8 9 *
6	ADMINISTRATIVE SYSTEM UNIT CODE	15	0 1 2 3 4 5 6 7 8 9 *
		16	0 1 2 3 4 5 6 7 8 9 *
		17	0 1 2 3 4 5 6 7 8 9 *
7	COUNTY CODE	18	0 1 2 3 4 5 6 7 8 9 *
		19	0 1 2 3 4 5 6 7 8 9 *
8	COUNTY CLUSTER	20	0 1 2 3 4 5 6 7 8 9 *
		21	0 1 2 3 4 5 6 7 8 9 *
9	MONTH AND YEAR REPORTED	22	0 1 2 3 4 5 6 7 8 9 *
		23	0 1 2 3 4 5 6 7 8 9 *
		24	0 1 2 3 4 5 6 7 8 9 *
		25	0 1 2 3 4 5 6 7 8 9 *
10	TEACHER, COORDINATOR, OR INSTRUCTOR	26	0 1 2 3 4 5 6 7 8 9 *
		27	0 1 2 3 4 5 6 7 8 9 *
		28	0 1 2 3 4 5 6 7 8 9 *
		29	0 1 2 3 4 5 6 7 8 9 *
11	STUDENT CHARACTER.	30	1 2
12	RES. AREA SERVED	31	1 2 3
13	PROGRAM IDENTIFICAT.	32	0 1 2 3 4 5 6 7 8 9 *
14	HOURS TAUGHT THIS MONTH	33	0 1 2 3 4 5 6 7 8 9 *
		34	0 1 2 3 4 5 6 7 8 9 *
		35	0 1 2 3 4 5 6 7 8 9 *
15	YEARS COVERED IN F/U	36	0 1 2 3 4 5 6 7 8 9 *
16	CONTRACT TIME	37	0 1 2 3 4 5 6 7 8 9 *
17	OTHER EMPL. ACTIVITIES	38	0 1 2 3 4 5 6 7 8 9 *
18	BASIC VOC. ED. IND.	39	0 1 2 3 4 5 6 7 8 9 *
		40	0 1 2 3 4 5 6 7 8 9 *

EXHIBIT C

86359

VOCATIONAL-TECHNICAL PROGRAM ENROLLMENT DATA CARD

1	STUDENT OE CODE NUMBER	1	0 1 2 3 4 5 6 7 8 9 *
		2	0 1 2 3 4 5 6 7 8 9 *
		3	0 1 2 3 4 5 6 7 8 9 *
		4	0 1 2 3 4 5 6 7 8 9 *
2	TOTAL ENROLLMENT	5	0 1 2 3 4 5 6 7 8 9 *
		6	0 1 2 3 4 5 6 7 8 9 *
3	URBAN ENROLLMENT	7	0 1 2 3 4 5 6 7 8 9 *
		8	0 1 2 3 4 5 6 7 8 9 *
4	SUBURBAN ENROLLMENT	9	0 1 2 3 4 5 6 7 8 9 *
		10	0 1 2 3 4 5 6 7 8 9 *
5	RURAL ENROLLMENT	11	0 1 2 3 4 5 6 7 8 9 *
		12	0 1 2 3 4 5 6 7 8 9 *
6	SEVENTH GRADE BOYS ENROLLED	13	0 1 2 3 4 5 6 7 8 9 *
		14	0 1 2 3 4 5 6 7 8 9 *
7	SEVENTH GRADE GIRLS ENROLLED	15	0 1 2 3 4 5 6 7 8 9 *
		16	0 1 2 3 4 5 6 7 8 9 *
8	SEVENTH GRADE STUDENTS COMPLETING COURSE OF STUDY	17	0 1 2 3 4 5 6 7 8 9 *
		18	0 1 2 3 4 5 6 7 8 9 *
9	EIGHTH GRADE BOYS ENROLLED	19	0 1 2 3 4 5 6 7 8 9 *
		20	0 1 2 3 4 5 6 7 8 9 *
10	EIGHTH GRADE GIRLS ENROLLED	21	0 1 2 3 4 5 6 7 8 9 *
		22	0 1 2 3 4 5 6 7 8 9 *
11	EIGHTH GRADE STUDENTS COMPLETING COURSE OF STUDY	23	0 1 2 3 4 5 6 7 8 9 *
		24	0 1 2 3 4 5 6 7 8 9 *
12	NINTH GRADE BOYS ENROLLED	25	0 1 2 3 4 5 6 7 8 9 *
		26	0 1 2 3 4 5 6 7 8 9 *
13	NINTH GRADE GIRLS ENROLLED	27	0 1 2 3 4 5 6 7 8 9 *
		28	0 1 2 3 4 5 6 7 8 9 *
14	NINTH GRADE STUDENTS COMPLETING COURSE OF STUDY	29	0 1 2 3 4 5 6 7 8 9 *
		30	0 1 2 3 4 5 6 7 8 9 *
15	TENTH GRADE BOYS ENROLLED	31	0 1 2 3 4 5 6 7 8 9 *
		32	0 1 2 3 4 5 6 7 8 9 *
16	TENTH GRADE GIRLS ENROLLED	33	0 1 2 3 4 5 6 7 8 9 *
		34	0 1 2 3 4 5 6 7 8 9 *
17	TENTH GRADE STUDENTS COMPLETING COURSE OF STUDY	35	0 1 2 3 4 5 6 7 8 9 *
		36	0 1 2 3 4 5 6 7 8 9 *
18	ELEVENTH GRADE BOYS ENROLLED	37	0 1 2 3 4 5 6 7 8 9 *
		38	0 1 2 3 4 5 6 7 8 9 *
19	ELEVENTH GRADE GIRLS ENROLLED	39	0 1 2 3 4 5 6 7 8 9 *
		40	0 1 2 3 4 5 6 7 8 9 *

86360

20	ELEVENTH GRADE STUDENTS COMPLETING COURSE OF STUDY	41	0 1 2 3 4 5 6 7 8 9 *
		42	0 1 2 3 4 5 6 7 8 9 *
21	TWELFTH GRADE BOYS ENROLLED	43	0 1 2 3 4 5 6 7 8 9 *
		44	0 1 2 3 4 5 6 7 8 9 *
22	TWELFTH GRADE GIRLS ENROLLED	45	0 1 2 3 4 5 6 7 8 9 *
		46	0 1 2 3 4 5 6 7 8 9 *
23	TWELFTH GRADE BOYS COMPLETING COURSE OF STUDY	47	0 1 2 3 4 5 6 7 8 9 *
		48	0 1 2 3 4 5 6 7 8 9 *
24	TWELFTH GRADE GIRLS COMPLETING COURSE OF STUDY	49	0 1 2 3 4 5 6 7 8 9 *
		50	0 1 2 3 4 5 6 7 8 9 *
25	HANDICAPPED ENROLLED	51	0 1 2 3 4 5 6 7 8 9 *
		52	0 1 2 3 4 5 6 7 8 9 *
26	DISADVANTAGED ENROLLED	53	0 1 2 3 4 5 6 7 8 9 *
		54	0 1 2 3 4 5 6 7 8 9 *
27	HANDICAPPED PLANNING TO ENTER POST-SECONDARY VOC. P.	55	0 1 2 3 4 5 6 7 8 9 *
		56	0 1 2 3 4 5 6 7 8 9 *
28	DISADVANTAGED PLAN TO ATTEND POST-SECONDARY VOC. PROGRAMS	57	0 1 2 3 4 5 6 7 8 9 *
		58	0 1 2 3 4 5 6 7 8 9 *
29	OTHER GRADUATES PLANNING TO ATTEND POST-SECONDARY VOC. P.	59	0 1 2 3 4 5 6 7 8 9 *
		60	0 1 2 3 4 5 6 7 8 9 *
30	GRADUATES EMPLOYED	61	0 1 2 3 4 5 6 7 8 9 *
		62	0 1 2 3 4 5 6 7 8 9 *
31	GRADUATES AVAILABLE FOR EMPLOYMENT	63	0 1 2 3 4 5 6 7 8 9 *
		64	0 1 2 3 4 5 6 7 8 9 *
32	POST-SECONDARY ENROLLMENT FULL-TIME (FIRST YEAR)	65	0 1 2 3 4 5 6 7 8 9 *
		66	0 1 2 3 4 5 6 7 8 9 *
33	POST-SECONDARY ENROLLMENT FULL-TIME (SECOND YEAR)	67	0 1 2 3 4 5 6 7 8 9 *
		68	0 1 2 3 4 5 6 7 8 9 *
34	POST-SECONDARY ENROLLMENT PART-TIME	69	0 1 2 3 4 5 6 7 8 9 *
		70	0 1 2 3 4 5 6 7 8 9 *
35	ADULT PREPARATORY ENROLLMENT	71	0 1 2 3 4 5 6 7 8 9 *
		72	0 1 2 3 4 5 6 7 8 9 *
36	ADULT EXTENSION ENROLLMENT	73	0 1 2 3 4 5 6 7 8 9 *
		74	0 1 2 3 4 5 6 7 8 9 *
37	POST-SECONDARY, ADULT, & PREP. ENROLLMENT 16 TO 22 YEARS	75	0 1 2 3 4 5 6 7 8 9 *
		76	0 1 2 3 4 5 6 7 8 9 *
38	PREPARATORY & EXTENSION ENROLLED IN PREVIOUS COURSE	77	0 1 2 3 4 5 6 7 8 9 *
		78	0 1 2 3 4 5 6 7 8 9 *
39	STUDENTS WHO LEFT PROGRAM WITH MARKETABLE SKILLS	79	0 1 2 3 4 5 6 7 8 9 *
		80	0 1 2 3 4 5 6 7 8 9 *

EXHIBIT D

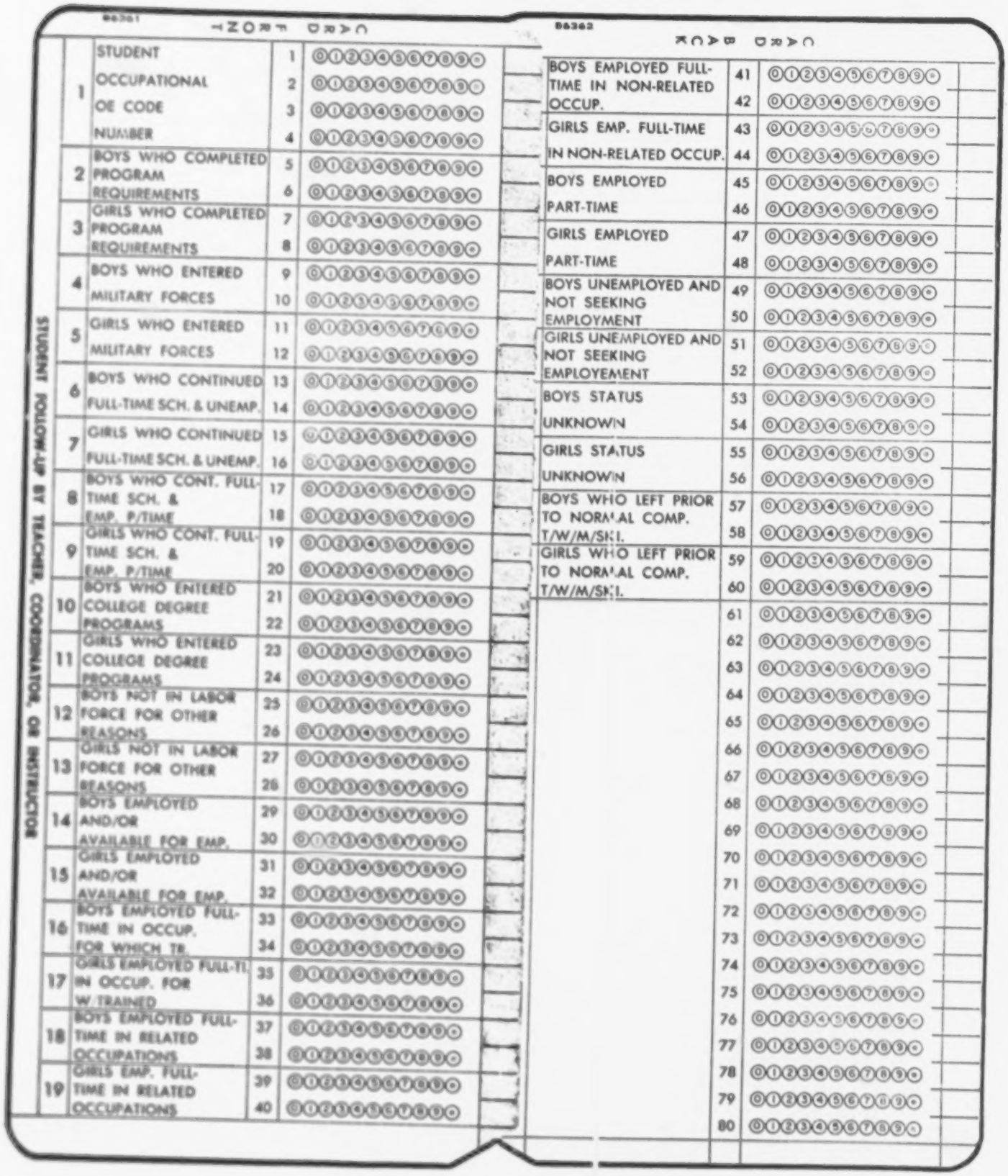
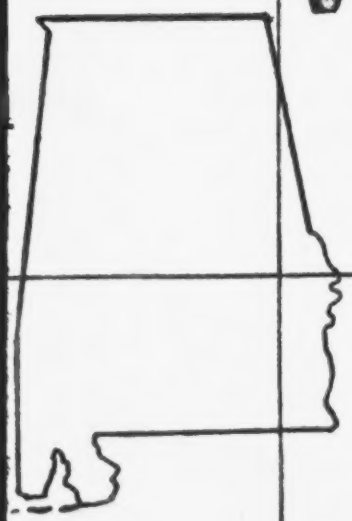

86361
STUDENT FOLLOW-UP BY TEACHER, COORDINATOR, OR INSTRUCTOR
1 STUDENT OCCUPATIONAL OE CODE NUMBER 1 2 3 4
2 BOYS WHO COMPLETED PROGRAM REQUIREMENTS 5 6
3 GIRLS WHO COMPLETED PROGRAM REQUIREMENTS 7 8
4 BOYS WHO ENTERED MILITARY FORCES 9 10
5 GIRLS WHO ENTERED MILITARY FORCES 11 12
6 BOYS WHO CONTINUED FULL-TIME SCH. & UNEMP. 13 14
7 GIRLS WHO CONTINUED FULL-TIME SCH. & UNEMP. 15 16
8 BOYS WHO CONT. FULL-TIME SCH. & EMP. P/TIME 17 18
9 GIRLS WHO CONT. FULL-TIME SCH. & EMP. P/TIME 19 20
10 BOYS WHO ENTERED COLLEGE DEGREE PROGRAMS 21 22
11 GIRLS WHO ENTERED COLLEGE DEGREE PROGRAMS 23 24
12 BOYS NOT IN LABOR FORCE FOR OTHER REASONS 25 26
13 GIRLS NOT IN LABOR FORCE FOR OTHER REASONS 27 28
14 BOYS EMPLOYED AND/OR AVAILABLE FOR EMP. 29 30
15 GIRLS EMPLOYED AND/OR AVAILABLE FOR EMP. 31 32
16 BOYS EMPLOYED FULL-TIME IN OCCUP. FOR WHICH TR. 33 34
17 GIRLS EMPLOYED FULL-TI. IN OCCUP. FOR W. TRAINED 35 36
18 BOYS EMPLOYED FULL-TIME IN RELATED OCCUPATIONS 37 38
19 GIRLS EMP. FULL-TIME IN RELATED OCCUPATIONS 39 40
86362
BOYS EMPLOYED FULL-TIME IN NON-RELATED OCCUP. 41 42
GIRLS EMP. FULL-TIME IN NON-RELATED OCCUP. 43 44
BOYS EMPLOYED PART-TIME 45 46
GIRLS EMPLOYED PART-TIME 47 48
BOYS UNEMPLOYED AND NOT SEEKING EMPLOYMENT 49 50
GIRLS UNEMPLOYED AND NOT SEEKING EMPLOYEMENT 51 52
BOYS STATUS UNKNOWN 53 54
GIRLS STATUS UNKNOWN 55 56
BOYS WHO LEFT PRIOR TO NORMAL COMP. T/W/M/SKL. 57 58
GIRLS WHO LEFT PRIOR TO NORMAL COMP. T/W/M/SKL. 59 60
61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

EXHIBIT E

VOCATIONAL EDUCATION



OCCUPATIONAL INFORMATION SERVICE SYSTEM

USER'S MANUAL

ALABAMA

INTRODUCTION

This publication is a product of a pilot investigation being conducted by the Occuptional Research Coordinating Unit at Auburn University in cooperation with the Division of Vocational Education, State Department of Education, and under contract with the Bureau of Research, U. S. Office of Education.

The Occupational Information Service System is intended to provide the State Director of Vocational Education and his Staff, the State Superintendent and the State Board of Education, and City and County Superintendents with valuable information for planning and programming vocational-technical education on a county, multi-county, and state basis. This investigation will also be of value to vocational education in other states for either the development or refinement of similar information systems.

The primary objective is to investigate and resolve some of the problems associated with developing and operating a permanent state occupational information system and providing information services for planning and programming vocational-technical education.

During the course of this investigation, a small-scale occupational information system is being established by involving six selected Alabama counties (Autauga, Elmore, Lee, Macon, Montgomery and Russell). These data sources for the system consist of both public and private agencies and businesses operating in the six counties.

This manual provides information and instructions for assisting local school personnel with the procedures involved in data reporting activities.

MASTER DATA CARD

The master data card provides general program identification data. One completed master card ( ) will accompany each set of completed Program Enrollment Data Cards, Student Follow-Up Data Cards, and the Student Information Data Cards.

Master Card Design

Optical scanner card column numbers are located on the extreme left side of the card. These numbers are for item identification. Do not mark in this column.

Key punch card column numbers are located to the immediate right side of each item. Do not mark in this column.

The numbers ranging from zero to nine are for optical scanner card reporting. Use a number two pencil to darken or blot the appropriate numbers.

The spaces provided on the extreme right side of the card are for recording the numbers reported.

EXAMPLE:

EXAMPLE:

The vocational division code is reported (Vo-Ag 01) by darkening the appropriate number in the zero to nine column and by recording this number in the extreme right column.

1	Vocational	2	0	1	2	3	4	5	6	7	8	9	0
	Division	3	0	1	2	3	4	5	6	7	8	9	1
(A)	(B)	(C)					(D)						(E)

Where:

A = Optical scanner card column number
B = Item
C = Key punch card column number
D = Code number reported for optical scanner reading
E = Space for recording the code reported.

Identifying Codes

Card Column	Item	Code Numbers	
1	Vocational Division	01 - Vocational Agric.	04 - Distributive Ed.
		07 - Health Occup.	09 - Consumer Home Ec.
		14 - Bus. & Office Ed.	99 - Occup. Home Ec.
		17 - T & I Education	16 - Technical Ed.

Identifying Codes (Cont'd.)

Card Column	Item	Code Numbers
2	Occupational Identification OE Code Number	Report the OE code number for the occupation that you teach by recording the first four numbers to the right of the decimal. Example: Consumer Homemaking is recorded 0100. Occupational Home Economics-Food Management, Production, and Service as 0203

01 AGRICULTURE

Agriculture Production	01.01	00
Agriculture Supplies	01.02	00
gricultural Mechanics	01.03	00
cultural Products	01.04	00
al Horticulture	01.05	00
Resources	01.06	00
	01.07	00
	01.99	00

	04.01	01
	4.01	02
	1	03
		4

3	Instructional Program	1 - Preparatory 2 - Cooperative 3 - Supplementary
4	Program Classification	0 - Junior High 1 - Comprehensive High 2 - Area Voc. High 3 - Residential School 4 - Adult Program 5 - Apprenticeship 6 - State Voc.-Tech. 7 - Junior College 8 - MDTA-Regular 9 - Private Vocational School or Business College 10 - Rehab. Facility 11 - MDTA-Contract 12 - OEO

Identifying Codes (Cont'd.)

Card Column	Item	Code Numbers
5	School	Autauga County 0010 - Autauga County High 0020 - Billingsley 0040 - Jones 0050 - Marbury 0060 - Pine Level 0070 - Prattville Jr. High 1010 - Autauga County Training - New Salem hland High

Card Column	Card Column	Card Column	Name of System
6	7	8	
School System	County	County Cluster	
001	04	09	Autauga County
002	05	14	Baldwin County

VOCATIONAL-TECHNICAL PROGRAM ENROLLMENT DATA CARD

One card must be completed in October and June to report each Office of Education Code Number. If more than one code number is reported, use separate cards for each number.

Card Column	Item	Answer Code and/or Instructions
1	Student OE Code Number	Report the first four digits to the right of the decimal. Use four digits. Example: 17.15 99 00 00 is recorded 1599.
2	Total Enrollment	Report the total number of students who are engaged in the same occupational area of study as indicated by the OE Code in item number one. Use two digits. Example: Three students are reported by darkening the zero in the first row and the three in the second row.

STUDENT FOLLOW-UP BY TEACHER, COORDINATOR, OR INSTRUCTOR

One card must be completed for reporting each Office of Education Code Number. If more than one code number is reported, use separate cards for each number.

Card Column	Item	Answer Code and/or Instructions
1	Student Occupational OE Code Number	Report the first four digits to the right of the decimal of the code number for the occupation for which the students received training. Use four digits. Example: 01.01 03 00 00 is recorded 0103.

1 number of boys who com-
rements during the
nducted.

STUDENT FOLLOW-UP DATA CARD

Each student will complete a Student Follow-Up Data Card prior to program exit. This includes program graduates, transfers, and dropouts. In the event a student should exit from the program before completing a data card, the teacher, coordinator, or instructor will complete a card for him.

The data cards will be handled on a cumulative basis by each teacher, coordinator, and instructor. The accumulated cards will be mailed to the Information Service System at the end of each school year or upon program completion.

DATA CARD DESIGN

The Student Follow-Up Data Card provides for collection of nine items of information. Each information item section is identified by a shaded block number located within the respective item section. The section numbers and information items are:

CARD FRONT

Section Number	Information Item
1	The Student's Name

INSTRUCTIONAL FACILITIES DATA CARD

The term facility, as used here, refers to a classroom, shop, or laboratory used for instructional purposes.

Use card Columns 12 through 22 to report data pertaining to the facility utilized for the instructional program identified in card Columns 1 through 10. If two facilities are used for this same instructional program (for instance, a classroom and a laboratory or two laboratories) report data pertaining to the second facility in Card Columns 23 through 33. Use additional cards, as required, to report utilization of more than two facilities by this teacher for this instructional program.

A separate card must be used for each different instructional program (as identified in Card Columns 1 through 10) conducted by this teacher.

Card Column	Item	Answer Code and/or Information
1-10		Refer to the Master Data Card section of the User's Manual for directions for completing Card Columns 1 through 10. MAKE NO MARKS IN THIS COLUMN
	lity	1 - Classroom 2 - Laboratory or Shop 3 - Classroom - Laboratory combination (both in same room)
		the number by which the 's (or director's) office is facility. Use ample: Room No.
		the state- the

EXHIBIT F

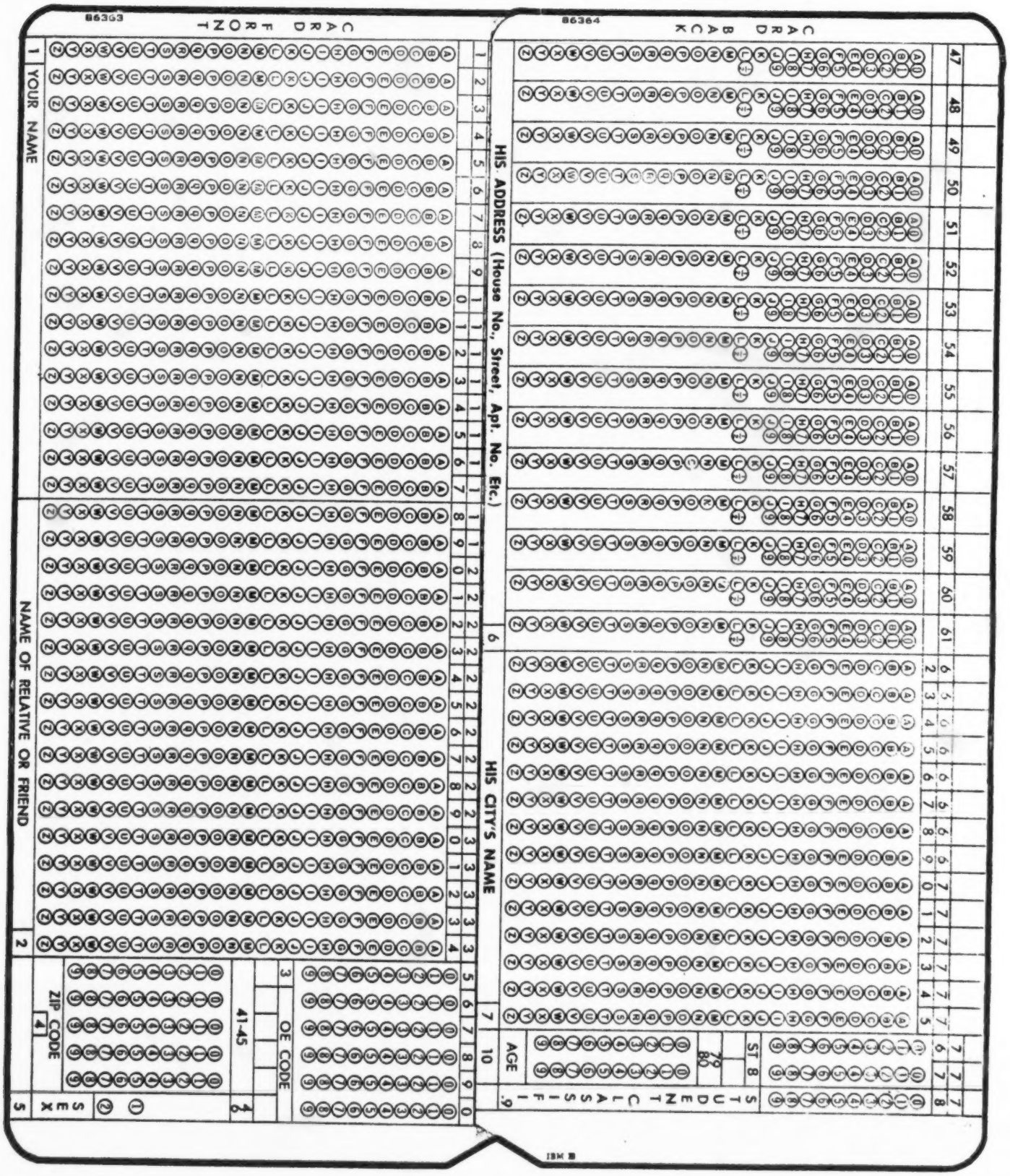

86363
86364
1 YOUR NAME
NAME OF RELATIVE OR FRIEND
HIS ADDRESS (House No., Street, Apt. No. Etc.)
HIS CITY'S NAME
ZIP CODE
OE CODE
41-45
SEX
AGE
STATE
CITIZENSHIP
IBM

EXHIBIT G

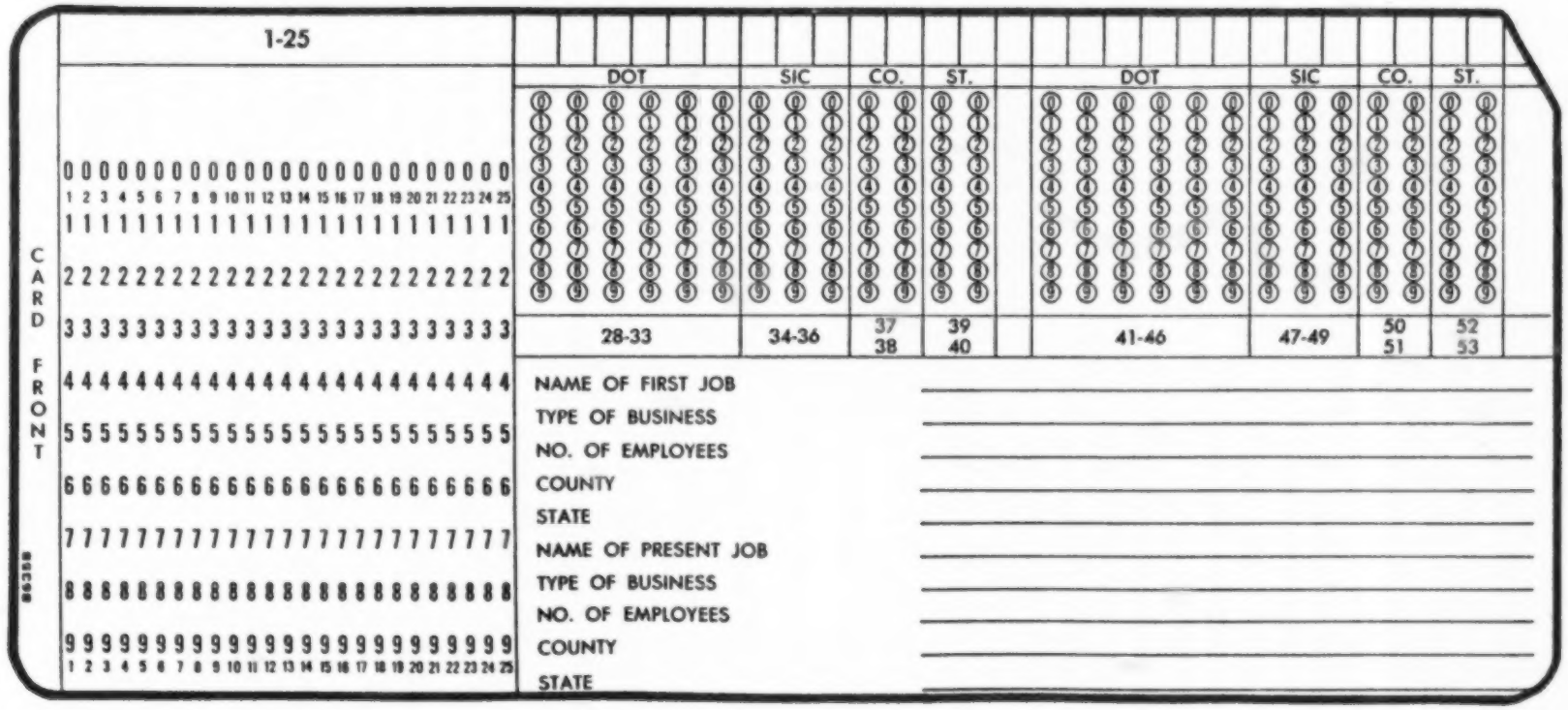

1-25
DOT
SIC
CO.
ST.
DOT
SIC
CO.
ST.
28-33
34-36
37 38
39 40
41-46
47-49
50 51
52 53
NAME OF FIRST JOB
TYPE OF BUSINESS
NO. OF EMPLOYEES
COUNTY
STATE
NAME OF PRESENT JOB
TYPE OF BUSINESS
NO. OF EMPLOYEES
COUNTY
STATE
CARD FRONT
86358

EXHIBIT H

LEAST SQUARES METHODOLOGY FOR STRAIGHT LINE

TIME SERIES PROJECTION

$Y_{c_1}, Y_{c_2}, Y_{c_3} \cdots Y_{c_n}$ which are points on a least squares line can be determined by the equation:

$$Y_C = a + bX$$

Where the constants a and b are determined by solving simultaneously the equations:

$$\text{I.} \quad \Sigma Y = aN + b\Sigma X$$

$$\text{II.} \quad \Sigma XY = a\Sigma X + b\Sigma X^2$$

or

$$a = \frac{(\Sigma Y)(\Sigma X^2) - (\Sigma X)(\Sigma XY)}{N\Sigma X^2 - (\Sigma X)^2}$$

and

$$b = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{N\Sigma X^2 - (\Sigma X)^2} .$$

In the formula $Y_C = a + b X$, X is a function of the number of units of time from the central time unit of the base data for which a Y_C value is desired.

EXHIBIT I

CURRENT AND PROJECTED POPULATION BY AGE GROUPS

Age Groups Intervals	State				Vocational Planning Area			
	Number			% Change	Number			% Change
	Current	1-year	5-years	5-years	Current	1-year	5-years	5-years
14-17	29,706	30,168	32,016	+7.8	14,564	14,881	16,147	+10.9
18-24	47,776	48,240	50,097	+4.9	18,635	18,721	19,065	+ 2.3
25-65	150,041	150,643	153,052	+2.00	74,546	74,823	75,933	+ 1.9

EXHIBIT J

ESTIMATED CURRENT AND PROJECTED SCHOOL POPULATION GRADES ONE THROUGH TWELVE BY CHARACTERISTICS

Characteristics	State				Vocational Planning Area			
	Number			% of Total	Number			% of Total
	Current	1-year	5-years	Current	Current	1-year	5-years	Current
Total Enrollment	85,133	84,668	82,804	100.0	41,631	41,675	41,845	100.0
Non-White	37,820	37,243	34,933	44.4	17,721	17,781	18,023	42.6
White	47,313	47,425	47,871	55.6	23,910	23,894	23,831	57.4
Disadvantaged	28,094	27,940	27,325	33.0	12,072	12,085	12,135	29.0
Handicapped	9,365	9,313	9,108	11.0	4,579	4,584	4,603	11.0

EXHIBIT K

ESTIMATED CURRENT AND PROJECTED SECONDARY SCHOOL POPULATION

Grade Level	State				Vocational Planning Area			
	Number			% Change	Number			% Change
	Current	1-year	5-years	5 years	Current	1-year	5-years	5-years
1-6	47,815	47,392	45,697	-4.4	23,444	23,319	22,817	-2.7
7	8,280	8,356	8,660	+4.6	4,093	4,145	4,353	+6.4
8	7,477	7,519	7,687	+2.8	3,572	3,601	3,717	+4.1
9	6,838	6,887	7,083	+3.6	3,117	3,141	3,237	+3.8
10	6,309	6,374	6,634	+5.2	3,001	3,029	3,141	+4.7
11	5,443	5,500	5,728	+5.2	2,544	2,555	2,599	+2.2
12	4,545	4,585	4,745	+2.2	2,030	2,108	2,238	+6.2
Total	86,707	86,613	86,234		41,801	41,898	42,102	

EXHIBIT L

ESTIMATED CURRENT AND PROJECTED POTENTIAL SECONDARY SCHOOL VOCATIONAL ENROLLMENT

Grade Level	State				Vocational Planning Area			
	Number			% Change	Number			% Change
	Current	1-year	5-years	5-years	Current	1-year	5-years	5-years
7	6,326	6,384	6,620	+4.6	3,200	3,217	3,368	+4.7
8	5,523	5,547	5,647	+2.2	2,679	2,673	2,732	+2.0
9	4,884	4,915	5,043	+3.3	2,224	2,213	2,252	+1.3
10	4,355	4,402	4,594	+4.4	2,108	2,101	2,156	+2.3
11	3,489	3,528	3,688	+5.7	1,651	1,627	1,614	-2.2
12	2,591	2,613	2,705	+4.4	1,137	1,180	1,253	+10.2
Total	27,168	27,389	28,297	+4.2	12,999	13,011	13,375	+2.9

EXHIBIT M

OCCUPATIONS	MANPOWER DEMAND * STATE CURRENT YEAR	STATE ONE YEAR	STATE FIVE YEARS	STATE FIVE YEAR ANNUAL AVG.	VOC. PLANNING AREA CURRENT YEAR	VOC. PLANNING AREA ONE YEAR	VOC. PLANNING AREA FIVE YEARS	VOC. PLANNING AREA FIVE YEAR ANNUAL AVG.
01 FARM & FARM WORKERS	2,703.5	2,735.9	2,864.3	32.1	656.2	628.4	517.1	27.8
02 PROFESSIONAL & TECH AGRI	607.4	612.4	639.3	6.3	184.3	179.6	157.2	5.4
02.01 AGRICULTURE SUPPLIES								
02.02 AGRICULTURE MECHANICS								
02.03 ORNAMENTAL HORICULTURE								
02.04 AGRICULTURAL RESOURCES								
02.05 FORESTRY								
02.06 OTHER AGRICULTURE								
03 SUB-TOTAL (LINES 1-2)	3,313.6	3,351.3	3,507.0	38.6	840.5	808.0	674.3	33.2
04 SALES WORKERS	13,260.8	13,564.7	14,911.3	330.1	7,716.3	7,921.2	8,613.5	179.4
05 DISTRIBUTIVE OCCUP.OTHER	16,334.1	16,704.7	18,431.0	419.3	9,456.9	9,687.8	10,261.4	160.9
05.01 ADVERTISING SERVICES								
05.02 APPAREL & ACCESSORIES								
05.03 AUTOMOTIVE								
05.04 FINANCE & CREDIT								
05.05 FOOD DISTRIBUTION								
05.06 FOOD SERVICES								
05.07 GEN. MERCHANDISE								
05.08 HARDWARE/BUILDING MAT.								
05.09 HOME FURNISHINGS								
05.10 HOTEL & LODGING								
05.11 INSURANCE								
05.12 MANAGEMENT								
05.13 MARKETING								
05.14 REAL ESTATE								
05.15 RETAIL TRADE								
05.16 TRANSPORTATION								
05.17 WHOLESALE TRADE								
06 SUB-TOTAL (LINES 4-5)	29,579.3	30,253.6	33,321.8	748.5	17,173.3	17,609.1	18,874.5	340.2
07 PRACTICAL NURSES	155.5	160.2	180.0	4.9	104.0	106.7	117.7	2.7
08 PROFESSIONAL NURSES	280.8	289.2	324.6	8.7	185.9	190.7	208.2	4.4
09 TECH.,MED.,& DENTAL	122.4	125.9	141.6	3.8	81.4	83.6	91.8	2.0
09.01 CYTOLOGY TECH.								
09.02 DENTAL ASSISTANT								
09.03 DENTAL HYG.,ASSO. DEG.								
09.04 DENTAL LAB TECH.								
09.05 HISTOLOGY TECH.								
09.06 MED. LAB ASSISTANT								
09.07 MED. X-RAY TECHNICIAN								
09.08 OPTICIAN ASSISTANT								
10 SUB-TOTAL (LINES 7-8-9)	551.8	569.1	639.7	17.5	368.5	378.1	414.6	9.2

EXHIBIT M (CONTINUED)

OCCUPATIONS	MANPOWER DEMAND * STATE CURRENT YEAR	STATE ONE YEAR	STATE FIVE YEARS	STATE FIVE YEAR ANNUAL AVG.	VOC. PLANNING AREA CURRENT YEAR	VOC. PLANNING AREA ONE YEAR	VOC. PLANNING AREA FIVE YEARS	VOC. PLANNING AREA FIVE YEAR ANNUAL AVG.
11 OTHER MED., HEALTH WKR.	703.4	725.4	816.0	22.5	462.4	474.6	522.5	12.0
11.01 NURSES' AIDE								
12 SUB-TOTAL (LINES 10-11)	1,261.5	1,300.3	1,462.3	40.1	832.8	854.8	939.5	21.3
13 PVT HOUSEHOLD & INST.WKRS	1,316.7	1,357.8	1,526.4	41.9	896.4	920.1	1,015.3	23.7
14 FOOD MGT. PROD & SER WKRS	1,758.0	1,806.4	1,999.5	48.3	1,013.6	1,037.3	1,060.9	9.4
15 SUB-TOTAL (LINES 13-14)	3,074.7	3,164.1	3,526.0	90.2	1,909.9	1,957.4	2,076.2	33.2
16 OCCUP PREP OTHERS	2,192.8	2,243.2	2,472.4	55.9	1,317.1	1,350.2	1,439.1	24.4
16.01 CHILD CARE								
16.02 CLO MGN PROD & SER								
16.03 HOME FUR EQUIP & SERV.								
17 SUB-TOTAL (LINES 15-16)	5,201.6	5,338.4	5,912.7	142.2	3,196.6	3,275.8	3,466.7	54.0
18 STENOS, TYPISTS, SECRETAR	6,150.0	6,289.8	6,979.4	165.8	3,542.3	3,630.6	3,905.2	72.5
19 OFFICE MACHINE OPERATORS	743.5	758.2	844.0	20.1	404.8	414.2	416.1	2.2
20 CLERICAL,KIN WKRS, OTHER	12,137.5	12,417.2	13,855.2	343.5	6,821.1	6,985.6	7,347.8	105.3
20.01 ACCOUNTING								
20.02 BOOKKEEPING								
20.03 BUS DATA PROC & COMP OP.								
20.04 CASHIERS								
20.05 CLERICAL, OTHERS								
20.06 TELLERS								
21 SUB-TOTAL (LINES 18,19&20	18,213.0	18,745.6	20,926.6	542.7	10,568.1	10,823.5	11,436.3	173.6
22 CRAFTSMEN	490.6	501.3	570.5	15.9	204.3	209.8	228.9	4.9
23 SURVEYORS	189.7	194.8	215.4	5.1	87.5	88.9	94.3	1.3
24 AIR TRAFFIC CONTROLS	10.7	11.1	12.5	.3	7.0	7.2	7.7	.1
25 SUBTOTAL (LINES 22,23&24)	689.4	705.5	796.7	21.4	298.2	304.9	330.3	6.4
26 OTHER TECH EXC MED & DENT	1,008.3	1,021.3	1,139.2	26.1	490.1	501.6	518.4	5.6
26.01 AUTOMOTIVE								
26.02 CHEMICAL								
26.03 CIVIL								
26.04 COMMERCIAL PILOT								
26.05 ELECTRICAL								
26.06 ENGINEERING								
26.07 ENVIRONMENTAL CONTROL								
26.08 FIRE AND SAFETY								
26.09 HEALTH RELATED								
26.10 INDUSTRIAL								
26.11 INSTRUMENTAL								
26.12 MACHINE								
26.13 MECHANICAL								

EXHIBIT M (CONTINUED)

OCCUPATIONS	MANPOWER DEMAND * STATE CURRENT YEAR	STATE ONE YEAR	STATE FIVE YEARS	STATE FIVE YEAR ANNUAL AVG.	VOC. PLANNING AREA CURRENT YEAR	VOC. PLANNING AREA ONE YEAR	VOC. PLANNING AREA FIVE YEARS	VOC. PLANNING AREA FIVE YEAR ANNUAL AVG.
26.14 METALLURGICAL								
26.15 NUCLEAR								
26.16 OFFICE RELATED								
26.17 PETROLEUM								
26.18 POLICE SCIENCE								
26.19 SCIENTIFIC								
27 SUB-TOTAL (LINES 25-26)	1,699.8	1,727.8	1,936.7	47.3	788.6	806.7	848.8	12.0
28 CARPENTERS	1,472.6	1,506.2	1,660.4	37.5	840.7	857.8	919.5	15.7
29 BRICKMASONS & TILE SETTER	307.0	315.3	348.7	8.3	176.2	179.5	192.4	3.2
30 CEMENT, CONCRETE FINISHER	103.7	106.4	118.2	2.9	59.8	60.8	65.3	1.1
31 ELECTRICIANS	556.0	567.4	631.6	15.1	308.7	315.6	326.8	3.6
32 PAINTERS & PAPERHANGERS	929.2	952.4	1,049.8	24.1	552.0	564.2	606.0	10.8
33 PLASTERERS	106.1	109.0	120.7	2.9	62.4	63.6	68.8	1.2
34 PLUMBERS AND PIPEFITTERS	519.5	529.5	590.4	14.1	284.6	290.3	310.4	5.1
35 ROOFERS AND SLATERS	94.6	97.1	107.5	2.5	54.3	55.4	59.4	1.0
36 STRUCTURAL METALWORKERS	101.4	103.0	114.1	2.5	54.7	55.9	60.2	1.1
37 MACHINIST &RELATED OCCUPT	440.1	444.7	523.4	16.6	148.3	153.6	168.2	3.9
38 BLKSMITHS,FORGE&HAMMERMEN	27.1	27.3	30.6	.7	14.7	15.0	16.5	.3
39 BOILERMAKERS	31.7	31.7	35.2	.7	17.4	17.7	19.3	.3
40 HEAT TREATERS,ANNEALERS	13.5	13.5	15.9	.4	4.0	4.2	4.8	.1
41 MILLWRIGHTS	82.0	80.5	87.8	1.1	36.1	36.5	36.6	.1
42 MOLDER METL EX COREMAKERS	29.0	28.3	33.0	.8	7.8	8.1	9.3	.3
43 PATTERN MAKERS METAL,WOOD	34.7	33.3	47.5	2.5	11.6	11.9	13.5	.3
44 ROLLERS AMD ROLL HANDS	11.0	9.8	10.5	— .1	2.8	2.9	3.3	.1
45 SHEET METAL WORKERS	169.1	171.3	193.3	4.8	87.3	89.2	96.7	1.8
46 TOOLMAKERS & DIEMAKERS	179.1	182.3	225.6	9.3	49.1	51.2	59.1	2.0
47 TRANSPORT & PUBLIC UTIL.	361.2	372.7	420.4	11.8	208.5	214.0	236.4	5.5
48 AIRPLANE MECH. &REPAIRMEN	156.3	160.3	179.3	4.6	104.3	107.0	117.5	2.6
49 MOTOR VEHICLE MECHANIC	1,176.3	1,211.0	1,354.4	35.6	762.9	783.1	857.0	18.8
50 OFFICE MACHINE MECHANICS	144.6	149.1	168.8	4.8	83.6	86.1	95.9	2.4
51 RADIO & TV MECHANICS	365.0	375.5	422.1	11.4	237.2	243.3	267.8	6.1
52 MECH & REPAIRMEN OCC OTH	2,597.6	2,640.1	2,937.6	68.0	1,399.0	1,430.3	1,495.3	19.2
52.01 AIR CONDITIONING								
52.02 APPLIANCE REPAIR								
52.03 AUTOBODY REPAIR								
52.04 DISEL MECHANIC								
52.05 ELECTRONICS COMMUNICAT.								
52.06 ELECTRONIC INDUSTRIAL								
52.07 INDUST ATOMIC ENERGY OCC								
52.08 SMALL ENGINE REPAIR								
52.09 WATCH REPAIR								
53 CABINETMAKERS	151.9	154.4	172.3	4.0	80.9	83.8	92.6	2.3
54 GLAZERS	40.1	41.2	45.2	1.0	23.7	24.3	26.4	.5

EXHIBIT M (CONTINUED)

OCCUPATIONS	STATE MANPOWER DEMAND *				VOC. PLANNING AREA MANPOWER DEMAND *			
	CURRENT YEAR	ONE YEAR	FIVE YEARS	FIVE YEAR ANNUAL AVG.	CURRENT YEAR	ONE YEAR	FIVE YEARS	FIVE YEAR ANNUAL AVG.
55 JEWELER AND WATCHMAKER	51.2	51.9	66.3	3.0	30.7	31.5	35.0	.8
56 LOOM FIXERS	29.7	29.3	32.9	.6	2.5	2.6	11.1	1.7
57 OPTICIAN, LENS GRINDER	15.0	14.4	15.7	.1	7.4	7.5	8.2	.1
58 UPHOLSTERS	188.5	192.6	217.2	5.7	108.5	112.4	125.3	3.3
59 PRINTING TRADES	173.0	167.4	196.6	4.7	41.7	42.9	46.0	.8
60 OTH. CRAFTSMEN & KIND.	3,391.0	3,429.5	3,825.9	86.9	1,724.2	1,759.2	1,682.7	8.3
60.01 MARITIME OCCUPATIONS								
61 SUB-TOTAL (LINES 28-59)	14,040.7	14,288.6	15,986.5	389.1	7,580.9	7,754.3	8,124.5	108.7
62 DRIVERS & DELIVERYMEN	3,511.3	3,556.9	3,776.6	53.0	2,038.2	2,071.1	1,896.9	28.2
63 CRANE DERRICK HOIST MEN	160.0	159.1	173.8	2.7	79.1	80.7	85.4	1.2
64 EXCAV GRAD MACH OPER.	462.4	474.4	522.8	12.0	259.9	264.5	281.9	4.4
65 WELDERS & FLAME CUTTERS	864.9	880.3	997.8	26.5	447.0	458.4	500.2	10.6
66 MACH TOOL OPER, CLASS B	256.9	259.9	305.5	9.7	100.3	103.2	115.4	3.0
67 ELECTROPLATERS	3.6	3.4	4.1	.1	.9	1.0	1.1	
68 SEWERS & STITCHERS	443.5	419.7	472.1	5.7	83.0	86.0	180.3	19.4
69 ASBESTOS, INSUL. WKRS.	38.6	38.6	43.1	.9	20.7	20.9	22.8	.4
70 ATTEND, AUTO SEV,PARK	332.1	342.0	383.3	10.2	203.8	209.4	231.8	5.6
71 BLASTERS & POWDERMEN	5.6	5.6	6.0		3.2	3.2	3.3	
72 LAUNDRY DRY CLEAN OPER.	352.8	363.7	408.5	11.1	238.0	244.3	268.6	6.1
73 MEAT CUT. EXC MEAT PACK.	181.0	186.8	210.5	5.9	81.3	83.9	92.4	2.2
74 OPERATIVE & KIND OCC OTH	10,217.3	10,192.9	11,509.0	258.3	4,149.7	4,224.7	4,150.6	.1
74.01 BARBERING								
74.02 COSMETOLOGY								
74.03 METALLURGY OCCUPATIONS								
74.04 NUCLEONIC OCCUPATIONS								
74.05 BAKER								
74.06 COOK/CHEF								
74.07 WAITER/WAITRESS								
74.08 COMMERCIAL ART								
74.09 COMMERCIAL FISHERY								
74.10 COMMERCIAL PHOTOGRAPHY								
74.11 PLASTICS OCCUPATIONS								
74.12 SHOE REPAIR								
75 SUB-TOTAL (LINES 62-74)	16,838.4	16,891.5	18,822.6	396.8	7,704.7	7,850.5	7,829.6	24.9
76 FIREMEN	254.9	263.1	295.9	8.2	165.2	168.5	181.6	3.2
77 POLICE OTH LAW ENFOR OFF	1,194.6	1,226.7	1,372.3	35.5	737.8	753.4	808.9	14.2
78 SUB-TOTAL (76-77)	1,450.2	1,490.4	1,669.0	43.7	903.4	922.4	990.8	17.4
79 SUB-TOT LINE 61 & 75 & 78	32,321.6	32,662.8	36,467.8	829.2	16,189.3	16,527.3	16,945.4	151.2
80 OTHER SERVICE WORKERS	4,469.1	4,588.4	5,088.3	123.8	2,867.4	2,939.3	3,048.9	36.3
80.C1 CUSTODIAL SERVICES								

EXHIBIT M (CONTINUED)

OCCUPATIONS	MANPOWER DEMAND* STATE CURRENT YEAR	STATE ONE YEAR	STATE FIVE YEARS	STATE FIVE YEAR ANNUAL AVG.	VOC. PLANNING AREA CURRENT YEAR	VOC. PLANNING AREA ONE YEAR	VOC. PLANNING AREA FIVE YEARS	VOC. PLANNING AREA FIVE YEAR ANNUAL AVG.
81 LABOR EXC FARM & MINE	8,434.4	8,561.8	9,234.1	159.9	3,930.3	3,970.1	4,037.2	21.3
82 PROFESS & KINDRED OCCUP.	9,565.9	9,775.8	10,914.7	269.7	5,103.0	5,210.0	5,250.2	29.4

* NOTE:

Five year annual average demand represents only projected needs based on previous economic and employment levels and does not include existing unfilled vacancies. State and local job surveys will be necessary to determine existing unfilled vacancies. Indented occupational groups represent a breakdown of occupational groups within a main heading. Employment data for the occupational groups is inclusive in respective main headings. State and local job surveys will be necessary to determine employment levels for the indented occupational groups.

Occupational groups 02.01, 02.02, 02.03, 02.04, 02.05 and 02.06 are not considered breakdowns of main heading 02.

EXHIBIT N

VOCATIONAL ENROLLMENT

OE CODE	INSTRUCTIONAL PROGRAM	TOTAL ALL GRADE LEVELS CURRENT YEAR BEGINNING STATE NO.	STATE PERCENT	VOC. PLANNING AREA NO.	VOC. PLANNING AREA PERCENT	TOTAL ALL GRADE LEVELS CURRENT YEAR ENDING STATE NO.	STATE PERCENT	VOC. PLANNING AREA NO.	VOC. PLANNING AREA PERCENT
1.0100	AGRICULTURE PRODUCTION	658	9.76	117	4.33	602	7.97	200	5.82
1.0200	AGRICULTURE SUPPLIES	34	.50			33	.44		
1.0300	AGRICULTURE MECHANICS	731	10.84	28	1.04	744	9.85	25	.73
1.0400	AGRICULTURE PRODUCTS	39	.58			40	.53		
1.0500	ORNAMENTAL HORICULTURE	61	.90	16	.59	61	.81	16	.47
1.0600	AGRICULTURAL RESOURCES	28	.42			28	.37		
1.0700	FORESTRY	27	.40			27	.36		
1.0900	OTHER AGRICULTURE	304	4.51	17	.63	296	3.92	1	.03
	SUB TOTAL	1882	27.91	178	2.64	1831	24.24	242	3.20
4.0101	ADVERTISING SERVICES	5	.07			7	.09	2	.06
4.0102	APPAREL & ACCESSORIES	12	.18			29	.38	17	.49
4.0103	AUTOMOTIVE	6	.09			6	.08		
4.0104	FINANCE & CREDIT					57	.75	57	1.66
4.0105	FOOD DISTRIBUTION	8	.12			15	.20	7	.20
4.0106	FOOD SERVICES	26	.39			25	.33		
4.0107	GEN. MERCHANDISE	52	.77	43	1.59	55	.73	50	1.45
4.0108	HARDWARE/BUILDING MAT.	7	.10			6	.08	2	.06
4.0109	HOME FURNISHINGS	2	.03			4	.05	2	.06
4.0110	HOTEL & LODGING	8	.12			8	.11		
4.0113	MANAGEMENT	56	.83	56	2.07	46	.61	46	1.34
4.0114	MARKETING	1	.01			5	.07	4	.12
4.0116	REAL ESTATE	1	.01			2	.03		
4.0117	RETAIL TRADE					8	.11	8	.23
4.0118	TRANSPORTATION	1	.01			1	.01		
4.0119	WHOLESALE TRADE					11	.15	11	.32
	SUB TOTAL	185	2.74	99	1.47	285	3.77	206	2.73
7.0101	DENTAL ASSISTANT	83	1.23	79	2.92	63	.83	59	1.72
7.0103	DENTAL LAB TECH.	3	.04	3	.11	1	.01	1	.03
7.0202	HISTOLOGY TECH.					3	.04		
7.0203	MED. LAB ASSISTANT	3	.04						
7.0205	NURSE, PRACTICAL (LPN)	75	1.11	60	2.22	83	1.10	68	1.98
7.0206	NURSES' AIDE	13	.19	6	.22	13	.17	6	.17
	SUB TOTAL	177	2.63	148	2.20	163	2.16	134	1.77
9.0100	CONSUMER HOMEMAKING	2297	34.07	454	16.78	2509	33.21	593	17.24

EXHIBIT O

ESTIMATED MANPOWER SUPPLY

		STATE				VOCATIONAL PLANNING AREA					
		CURRENT			ONE YEAR	CURRENT				ONE YEAR	
OE CODE	INSTRUCTIONAL PROGRAM	VOCATIONAL NO.	PERCENT	OTHER SECTOR NO. PERCENT	VOCATIONAL NO. PERCENT	VOCATIONAL NO.	PERCENT	OTHER SECTOR NO.	PERCENT	VOCATIONAL NO.	PERCENT
1.0100	AGRICULTURE PRODUCTION	4	.32		10 .75						
1.0200	AGRICULTURE SUPPLIES	7	.57		4 .30						
1.0300	AGRICULTURE MECHANICS	110	8.93		237 17.87					10	1.85
1.0400	AGRICULTURE PRODUCTS	2	.16		10 .75						
1.0500	ORNAMENTAL HORICULTURE	11	.89		10 .75	1	.18				
1.0600	AGRICULTURAL RESOURCES	7	.57		4 .30						
1.0700	FORESTRY	8	.65		9 .68						
1.0900	OTHER AGRICULTURE	87	7.06		31 2.34	1	.18				
	SUB TOTAL	236	19.16		315 23.76	2	.35			10	1.85
4.0101	ADVERTISING SERVICES	1	.08		4 .30	1	.18				
4.0102	APPAREL & ACCESSORIES	6	.49		9 .68	5	.88			1	.18
4.0103	AUTOMOTIVE				4 .30						
4.0104	FINANCE & CREDIT	3	.24			3	.53				
4.0105	FOOD DISTRIBUTION	2	.16		5 .38	1	.18				
4.0106	FOOD SERVICES	9	.73		8 .60						
4.0107	GEN. MERCHANDISE	28	2.27		19 1.43	28	4.96			16	2.96
4.0108	HARDWARE/BUILDING MAT.	4	.32		1 .08					1	.18
4.0109	HOME FURNISHINGS	2	.16		1 .08	1	.18				
4.0110	HOTEL & LODGING	4	.32		1 .08						
4.0113	MANAGEMENT										
4.0114	MARKETING	3	.24			2	.35				
4.0116	REAL ESTATE										
4.0117	RETAIL TRADE	2	.16			2	.35				
4.0118	TRANSPORTATION				1 .08						
4.0119	WHOLESALE TRADE	2	.16			2	.35				
	SUB TOTAL	66	5.36		53 4.00	45	7.96			18	3.33
7.0101	DENTAL ASSISTANT	7	.57		1 .08	6	1.06				
7.0103	DENTAL LAB TECH.										
7.0200	ORDERLY			20	3.41			20	3.64		
7.0202	HISTOLOGY TECH.										
7.0205	NURSE, PRACTICAL (LPN)	33	2.68	36	6.14	18 1.36		23	4.07	17	3.14
7.0206	NURSES' AIDE	5	.41					2	.35		
	SUB TOTAL	45	3.65	56	9.56	19 1.43		31	5.49	20 3.64	17 3.14
9.0100	CONSUMER HOMEMAKING	504	40.91		472 35.60	214	37.88			141	26.06

EXHIBIT P

VOCATIONAL PERSONNEL

Responsibility		Number					
		Secondary		Post-Secondary		Adult	
		State	Voc. Planning Area	State	Voc. Planning Area	State	Voc. Planning Area
Administration		2	1	2	2		
Supervision				3	2		
Counseling		5	4	1	0		
Instruction							
Program Area	OE Code						
Agriculture	01.0000	34	8			34	8
Business & Office	14.0000	6	2				
	14.0102					3	2
	14.0200			1	1		
	14.0203			2	2		
	14.0303			6	6	11	11
	14.0701					2	2
	14.0901					3	2
Distributive	04.0000	7	3				
	04.0400					1	1
	04.1300					1	1
	04.1500					1	1
Health	07.0206			8	5	3	2
	07.0302			8	5		
Home Economics Consumer	09.0100	36	6				
Home Economics Occupational	99.0000	6	1				
Technical	16.0108			3	3		

EXHIBIT P (Continued)

Program Area	OE Code	Number					
		Secondary		Post-Secondary		Adult	
	Responsibility	State	Voc. Planning Area	State	Voc. Planning Area	State	Voc. Planning Area
Trade & Industrial	17.0000	14	9				
	17.0100			2	2		
	17.0200					1	0
	17.0301			2	2		
	17.0302			5	5		
	17.0500					1	1
	17.0600			1	1		
	17.1000			1	1		
	17.1001					1	1
	17.1002			1	1	1	1
	17.1004	2	1	1	1		
	17.1007					1	1
	17.1200			1	1		
	17.1300			1	1	1	1
	17.1401			1	1		
	17.1500					1	1
	17.1502					1	1
	17.1503			2	2		
	17.1902			1	1		
	17.2102			1	1		
	17.2302			1	1		
	17.2306			1	1		
	17.2601			1	1		
	17.2602			4	4	2	2
	17.2801					2	0
	17.2802					2	0
	17.3000					1	0
	17.3300					1	0
	17.3302					2	2
	17.3399			1	1		
	17.3500			1	1		
	17.3601	1	0				

EXHIBIT C

PRELIMINARY APPORTIONMENT
VOCATIONAL PLANNING AREA

SCHOOL CODE	DE CODE	TYPE OF FACILITY	AREA IN Sq. FT.	STUDENT CAPACITY	PERIODS PER DAY	PERIODS/WK. FAC. USED	STUDENTS PER DAY	SURPLUS CAP./DAY	PERIODS PER WK NOT USED
		0			0				5
		1			0				5
		1			1				
		1			0				
		0			0				
		0			1				
		0			1				
		1			0				5
		1			0				
		0			2				
		1			0				
		0			0				
		0			0				
		1

EXHIBIT A

FOUR POINTS STUDENT FOLLOW-UP

CIP CLUSTER	COMPLETIONS NUMBER	COMPLETIONS PERCENT	STATE EMPLOYED RELATED NUMBER	STATE EMPLOYED RELATED PERCENT	STATE NON-RELATED NUMBER	STATE NON-RELATED PERCENT	VOCATIONAL PLANNING AREA COMPLETIONS NUMBER	VOCATIONAL PLANNING AREA COMPLETIONS PERCENT	VOCATIONAL PLANNING AREA EMPLOYED RELATED NUMBER	VOCATIONAL PLANNING AREA EMPLOYED RELATED PERCENT	VOCATIONAL PLANNING AREA NON-RELATED NUMBER	VOCATIONAL PLANNING AREA NON-RELATED PERCENT
0.[illegible]	78	8.00	23	32.86	13	18.57	54	11.10	15	27.78	12	22.22
0.[illegible]	4	.46										
0.[illegible]	88	10.08	26	29.26	1	1.01	1	.21			1	100.00
0.[illegible]	3	.33										
0.[illegible]	24	2.75	9	12.50	2	2.33	5	1.04	1	20.00	2	40.00
0.[illegible]	3	.33										
0.[illegible]	80	9.18	21	33.87	3	4.84	1	.21				
0.[illegible]	4	.46	1	25.00								
0.[illegible]	2	.23					2	.41				
0.[illegible]	2	.23					2	.41				
0.[illegible]	9	.97	2	40.00			5	1.04	2	40.00		
0.[illegible]	3	.34	2	66.67			2	.41	1	50.00		
0.[illegible]	3	.33										
0.[illegible]	3	.34	2	66.67			3	.62	2	66.67		
0.[illegible]	3	.33										
0.[illegible]	2	.23					2	.41				
0.[illegible]	8	.93	3	75.00			6	1.24	3	50.00		
0.[illegible]	6	.69	3	75.00			4	.83	3	75.00		
0.[illegible]					1	.08					1	.00
0.[illegible]	1	.11	1	100.00			1	.21	1	100.00		
0.[illegible]			1	.00					1	.00		
0.[illegible]	4	.46	4	100.00			4	.83	4	100.00		
0.[illegible]	2	.23	1	50.00			2	.41	1	50.00		
0.[illegible]	3	.34	2	66.67			3	.62	2	66.67		
0.[illegible]	8	.92	6	75.00			8	1.66	6	75.00		
0.[illegible]	1	.11					1	.21				
0.[illegible]	3	.33	2	200.00			1	.21	2	200.00		
0.[illegible]	4	.46	2	50.00			4	.83	2	50.00		
0.[illegible]	2	.23	1	100.00			1	.21	1	100.00		
0.[illegible]	1	.11					1	.21				
0.[illegible]	4	.46	4	100.00			4	.83	4	100.00		
0.[illegible]	7	.80	5	71.43			7	1.45	5	71.43		
0.[illegible]	1	.11	1	100.00								
0.[illegible]	34	3.91	33	97.06			34	7.04	33	97.06		
0.[illegible]	2	.23	1	50.00			2	.41	1	50.00		
0.[illegible]	1	.11										
0.[illegible]	1	.11			1	100.00						
0.[illegible]	8	.92	6	75.00			2	.41	3	150.00		
0.[illegible]	3	.34	3	100.00			1	.62	1	100.00		
0.[illegible]	6	.69			4	41.66						
0.[illegible]	9	1.03	8	88.89			9	1.86	8	88.89		
0.[illegible]	8	.97	6	85.71			2	.41	2	100.00		

EXHIBIT 8

ONE YEAR STUDENT RELOCATION

STUDENT OR LEAVE	FIRST JOB DATE	NO.	PERCENT	REMAINING EMPLOYMENT BY INDUSTRY SIC	NO.	PERCENT	COUNTY NAME	NO.	PERCENT	STATE NAME	NO.	PERCENT	RETURNS TOTAL	PERCENT OF TOTAL
[illegible]	[illegible]	2	33.33	[illegible]	1	16.67		1	16.67		1	16.67	6	4.26
[illegible]	[illegible]	2	33.33	[illegible]	1	16.67	PIKE	4	66.67	ALA	4	66.67		
[illegible]	[illegible]	1	16.67	[illegible]	1	16.67	MONTGOMA	1	16.67	CHIO	1	16.67		
[illegible]	[illegible]	1	16.67	[illegible]	1	16.67								
[illegible]				[illegible]	1	16.67								
[illegible]				[illegible]	1	16.67								
[illegible]	[illegible]	1	25.00	[illegible]	1	25.00	PIKE	4	100.00	ALA	4	100.00	4	2.84
[illegible]	[illegible]	1	25.00	[illegible]	1	25.00								
[illegible]	[illegible]	2	50.00	[illegible]	1	25.00								
[illegible]				[illegible]	1	25.00								
[illegible]	[illegible]	1	100.00	[illegible]	1	100.00	PIKE	1	100.00	ALA	1	100.00	1	.71
[illegible]	[illegible]	1	50.00	[illegible]	1	50.00	PIKE	1	50.00	ALA	2	100.00	2	1.42
[illegible]	[illegible]	1	50.00	[illegible]	1	50.00		1	50.00					
[illegible]		1	33.33		1	33.33	PIKE	2	66.67	ALA	3	100.00	3	2.13
[illegible]	[illegible]	1	33.33	[illegible]	1	33.33	MONTGOM	1	33.33					
[illegible]	[illegible]	1	33.33	[illegible]	1	33.33								
[illegible]	[illegible]	1	100.00	[illegible]	1	100.00	PIKE	1	100.00	ALA	1	100.00	1	.71
[illegible]	[illegible]	1	50.00	[illegible]	2	100.00	PIKE	2	100.00	ALA	2	100.00	2	1.42
[illegible]	[illegible]	1	50.00											
[illegible]	[illegible]	1	25.00	[illegible]	1	25.00	PIKE	4	100.00	ALA	4	100.00	4	2.84
[illegible]	[illegible]	3	75.00	[illegible]	2	50.00								
[illegible]				[illegible]	1	25.00								
[illegible]	[illegible]	1	100.00	[illegible]	1	100.00	PIKE	1	100.00	ALA	1	100.00	1	.71
[illegible]	[illegible]	1	100.00	[illegible]	1	100.00	PIKE	1	100.00	ALA	1	100.00	1	.71

EXHIBIT I

ONE YEAR STUDENT FOLLOW-UP

STUDENT ID CODE	PRESENT JOB	TERMINEE EMPLOYMENT BY INDUSTRY					COUNTY			STATE			RETURNS	
	DOT	NO.	PERCENT	SIC	NO.	PERCENT	NAME	NO.	PERCENT	NAME	NO.	PERCENT	TOTAL	PERCENT OF TOTAL
16.0901	90.999	1	16.67	651	1	16.67	MTGY	3	50.00	ALA	4	66.67		
16.0901	201.368	1	16.67	806	1	16.67	PIKE	1	16.67	OHIO	1	16.67		
16.0901	209.388	1	16.67	822	1	16.67								
16.0901	355.878	1	16.67	910	1	16.67								
16.0111	90.999	1	25.00	504	1	25.00	MTGY	3	75.00	ALA	4	100.00	4	2.84
16.0111	219.382	1	25.00	822	1	25.00	PIKE	1	25.00					
16.0111	219.582	1	25.00	920	2	50.00								
16.0111	269.782	1	25.00											
16.0113	17.281	1	100.00	151	1	100.00	MTGY	1	100.00	ALA	1	100.00	1	.71
16.0117	219.382	1	50.00	782	1	50.00	LEE	1	50.00	ALA	2	100.00	2	1.42
16.0117	624.281	1	50.00	829	1	50.00	PIKE	1	50.00					
17.0101	90.449	1	33.33	151	1	33.33		1	33.33	ALA	2	66.67	3	2.13
17.0101	637.281	1	33.33	171	1	33.33	MTGY	2	66.67	FLA	1	33.33		
17.0101	869.884	1	33.33	822	1	33.33								
17.0901	97.228	1	100.00	824	1	100.00	MTGY	1	100.00	ALA	1	100.00	1	.71
17.0902	620.281	1	50.00	753	2	100.00		1	50.00	ALA	1	50.00	2	1.42
17.0902	620.381	1	50.00				MTGY	1	50.00	GA	1	50.00		
17.1004	842.781	1	25.00	151	1	25.00		1	25.00	ALA	3	75.00	4	2.84
17.1004	861.381	3	75.00	174	1	75.00	MTGY	3	75.00	MASS	1	25.00		
17.1099	10.281	1	100.00	824	1	100.00	LEE	1	100.00	ALA	1	100.00	1	.71
17.1401	222.687	1	100.00	261	1	100.00	MTGY	1	100.00	ALA	1	100.00	1	.71
17.1500	637.887	1	100.00	822	1	100.00	MACON	1	100.00	ALA	1	100.00	1	.71